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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/752,894	12/27/2000	Thomas J. Clough	ES-65 - DIV-8	1336

7590 06/23/2004  
Thomas J. Clough  
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EXAMINER

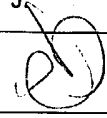
VO, HAI

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 06/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/752,894	<b>Applicant(s)</b> CLOUGH, THOMAS J.	
	<b>Examiner</b> Hai Vo	<b>Art Unit</b> 1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 10 May 2004.  
2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-3,6-10,15-17 and 20-22 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-3,6-10,15-17 and 20-22 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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1. The 102 art rejections over Palmer et al (US 3,847,676) are withdrawn.
2. The new grounds of rejection are made in view of the 112 claim rejections and obviousness-type double patenting rejections over Clough (US 6,514,641).

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 6-8, 15 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear that the porous organic polymer is the porous organic polymer particle or the porous organic polymer product. The examiner suggests the term "particle" should be added before "is" to make the claims consistent with the porous organic polymer particle as recited in claim 1.

***Double Patenting***

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thornton*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting

application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1-3, 6-10, 15-17, and 20-22 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-11 of U.S. Patent No. 6,514,641 in view of Palmer et al (US 3,847,676). Claims 1-11 of US 6,514,641 are directed to a battery separator comprising a plurality of elongated porous organic polymer particles having an average pore size distribution within the claimed range. However, the claims of US 6,514,641 do not disclose the porous organic polymer particle having a mean particle size and porosity as required by the claims. Palmer, however, teaches a battery separator comprising a non-woven mat of polypropylene fibers having a mean diameter of 0.05 to 50 microns within the claimed range (column 11, line 64) to make possible the combination of low electrical resistance and low maximum pore size in the non-woven mat. This is important to the expectation of successfully practicing the invention of the US patent 6,514,641 and thus suggesting the modification. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the porous organic polymer particles with the particle size as taught in the Palmer reference motivated by the desire to make possible the combination of low electrical resistance and low maximum pore size in the separator.

The separator of the US patent 6,514,641 as modified by Palmer comprising the porous polyethylene particle having the average particle size and pore size within the claimed ranges. It is believed that the particle size and the pore size altogether dictate the porosity of the particles.

Therefore, it is not seen that the porosity would have been outside the claimed range as the particle size and pore size within the claimed ranges.

The claims of the US patent 6,514,641 do not disclose the separator comprising a liquid contained in the pores of the porous organic polymer particle. Palmer teaches the mat comprising the wetting agent water mixture on the surface of the fibers and in the pores of the mat as well (column 7, lines 60-65). Likewise, the combination of the US patent 6,514,641 and the Palmer reference would arrive at the porous organic polymer product having the wetting agent water mixture inherently contained in the pores of the porous organic polymer particles. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the wetting agent in combination with the porous organic polymer particles motivated by the desire to optimize the long-term wettability of the porous particles.

7. The 102 art rejections over Palmer have been overcome by the present arguments. Palmer teaches the non-woven separator mat wherein the porosity is the open area that exists between the overlapping of the fibers, not the porosity in the fibers themselves. Palmer does not teach the fibers are themselves **porous** as required by the claims. To make claims clear

and commensurate in scope with specification and Applicant's arguments, the examiner suggests that claims should be rewritten as follows.

**Rewrite claim 1:**

A porous resilient organic polymer product comprising a reduced particle size non-spherical elongated porous organic polymer particle wherein the organic polymer particle has a mean particle size less than about 150 microns, and a plurality of open cell pores having an average pore size distribution of from about 0.02 to about 15 microns; wherein the pores represent at least about 40% of the total volume of the particle.

**Claim 6**, line 1, insert --particle-- before "is".

**Claim 7**, line 2, insert --particle-- before "is".

**Claim 8**, line 2, insert --particle-- before "is".

**Claim 10**, line 1, delete "particles are" and insert --particle is --.

**Claim 15**, line 2, insert --particle-- before "is".

**Claim 17**, line 1, delete "particles are" and insert --particle is --.

**Claim 20**, line 1, insert --particle-- before "is".

**Rewrite claim 9:**

A porous resilient organic polymer product comprising a reduced particle size non-spherical elongated porous organic polymer particle wherein the organic polymer particle has a mean particle size less than about 150 microns, and open cell pores having an average pore size distribution of from about 0.02 to about 15 microns; wherein the pores

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represent at least about 40% of the total volume of the particle; and wherein a liquid is contained in at least a part of said pores.

**Rewrite claim 16:**

A porous resilient organic polymer product comprising a reduced particle size free flowing powder of resilient non-spherical elongated porous organic polymer particles wherein the organic polymer particle has a mean particle size less than about 150 microns, and open cell pores having an average pore size distribution of from about 0.02 to about 15 microns; wherein the pores represent at least about 40% of the total volume of the particle; and wherein a liquid is contained in at least a part of said pores.

***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (571) 272-1485. The examiner can normally be reached on M,T,Th, F, 7:00-4:30 and on alternating Wednesdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private

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PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hai V.  
Tech Center 1700

HV